

In the Claims

Cancel claim 1.

Add new claims 2-6.

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1. (canceled)
2. (new) An extended length light emitting diode for use in apparatus to be viewed by an observer, comprising:
  - a. an LED die having electrical connection leads connected thereto and extending therefrom;
  - b. a molded body of electrical insulating material encompassing the LED die and a portion of each of the electrical connection leads and thereby protecting the LED die from the environment and insulating and supporting each of the electrical connection leads, said molded body having a length and a cylindrical shape terminating in an upper domed portion through which light emitted from the LED die emanates for viewing;
  - c. an extended length portion formed of electrical insulating material extending from the molded body and making longer the length of the molded body, the extended length portion encompassing an additional portion of each of the electrical connection leads and thereby further insulating and supporting each of the electrical connection leads, the extended length portion having a cylindrical shape matching the cylindrical shape of the molded body and a bottom which is planar in its entirety; whereby,
  - d. the extended length of the light emitting diode as provided by the extended length portion with its entirely planar bottom allows for auto-insertion of the extended length light emitting diode into a printed circuit board with the entirely planar bottom bearing directly against and lying flush with the upper surface of the printed circuit board without the need for an interceding spacer.

3. (new) An extended length light emitting diode for use in apparatus to be viewed by an observer, comprising:

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- a. an LED die having electrical connection leads connected thereto and extending therefrom;
- b. a molded body of electrical insulating material encompassing the LED die and a portion of each of the electrical connection leads and thereby protecting the LED die from the environment and insulating and supporting each of the electrical connection leads, said molded body having a length and a cylindrical shape terminating in an upper domed portion through which light emitted from the LED die emanates for viewing;
- c. a molded extended length body region formed of electrical insulating material and being integral to and formed in one unitary mass with the molded body and making longer the length of the molded body, the molded extended length body region encompassing an additional portion of each of the electrical connection leads and thereby further insulating and supporting each of the electrical connection leads, the molded extended length body region having a cylindrical shape matching the cylindrical shape of the molded body and a base which is planar in its entirety; whereby,
- d. the extended length of the light emitting diode as provided by the molded extended length body region with its entirely planar base allows for auto-insertion of the extended length light emitting diode into a printed circuit board with the entirely planar base bearing directly against and lying flush with the upper surface of the printed circuit board without the need for an interceding spacer.

4. (new) An extended length light emitting diode for use in apparatus to be viewed by an observer, comprising:

- a. an LED die having electrical connection leads connected thereto and extending therefrom;
- b. a molded body of electrical insulating material encompassing the LED die and a portion of each of the electrical connection leads and thereby protecting the LED die from the environment and insulating and supporting each of the electrical connection leads, said molded body having a length and a cylindrical shape extending from a base to an upper domed portion through which light emitted from the LED die emanates for viewing;
- c. a molded body extension formed of electrical insulating material, the molded body extension being separate from the molded body and having a length bounded by a lower surface which is planar in its entirety and an upper surface, the molded body extension having a cylindrical shape between the entirely planar lower surface and the upper surface which matches the cylindrical shape of the molded body, and the molded body extension further having individual holes for each of the electrical connection leads extending therethrough from the upper surface to the entirely planar lower surface;
- d. the molded body extension being fitted to the molded body with the individual holes receiving the electrical connection leads and with the upper surface abutting and being permanently affixed to the base of the molded body, the molded body extension thereby making longer the length of the molded body; whereby,
- e. the extended length of the light emitting diode as provided by the molded body extension with its

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entirely planar lower surface allows for auto-insertion of the extended length light emitting diode into a printed circuit board with the entirely planar lower surface bearing directly against and lying flush with the upper surface of the printed circuit board without the need for an interceding spacer.

5. (new) The extended length light emitting diode according to claim 4, wherein the base of the molded body and the upper surface of the molded body extension are both planar.

6. (new) The extended length light emitting diode according to claim 4, wherein the upper surface of the molded body extension is permanently affixed to the base of the molded body by adhesive.

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